RECORD

$

S/S

64-1

F/

all Copper [illegible]
[illegible]

15/ Bruce Boyer
x Benjamin Smith

June 21, 1924

J-21-1- Butte of the Hebron Brick Co. W. of Rd N. of Hebron.

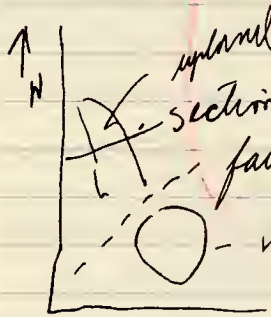
J-21-2- Pit west side of Road N. of Hebron.

J-21-3- Dudewitz Butte K. & C. Stone Co.

June 23.
White Butte
Loc. J-23-1

Loc J-23-2

200 yds on. White Butte H S layer in slope on Prairie upland

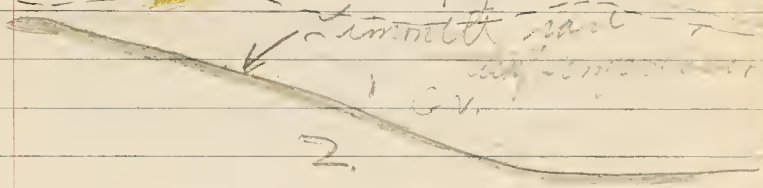


Appears about 20 feet above that of road even assuming a 30 ∠ dip of the section.

H S do not appear in section

W.B. [illegible]

contact G.V.-W.B.



G.V. [illegible]

[illegible] meadow

[illegible] meadow

Sample J-23-3-1

Hematite layer

Hematite [illegible] not [illegible]

Wondcot frame &
[illegible]

June 24 81

J-24-1 Loc. J-24-1
SW 1/4, SW 1/4, Sec 29
T134N, R97W
HS layer in roadside
bank [illegible]

J-24-2 Loc J-24-2 Same as
J-23-[illegible]

	4	3	2	
				A
				B
				C
				D
				E
				F

June 26

Bor 1-25-1 [illegible]

[illegible]

SE ¼ NE ¼ sec [illegible]

[illegible] W.

Elev	T	
0		Covered [illegible] tubular [illegible]
		F.U.
0.5		Fine GRAINED sub-ANGULAR [illegible] SAND [illegible] FX frags [illegible] some MICA [illegible]
3.0		Covered [illegible] G.VI
8		5YR 4.5/1 SILTY CLAY MASSIVE soft [illegible] [illegible] MOTTLING abt 1" MARKING [illegible] 5YR 5/1 LIMONITE occ on SURFACE as 10YR 7/6

Sec 2-26-1

10.5 Lignitic zone
Shale becomes
10YR [illegible]
Zone of 10YR 4/2
shales [illegible]
beds
with [illegible]
2-4" [illegible]
5Y 2/1

11.6" N7 Sh. w/clay no
silt) with plant
frags [illegible]
12.8 Sequoia ? [illegible]
leaf [illegible]
13.2 - 5YR 5/1 silty
shale with

Sec 1-26-1

Elev	T	
		brown plant frags.
13.5		V.f.g. silty ss
		MICA 5%
		Color - wh. N-7 with
		mottles of 5YR 5/1
		fresh same with
		3YR 5/1 plant mat.
		staining bedding
		planes.
		Rich leaf horizon.
		Bedding (laminae)
		Irrey sugg. of
		bedding. gypsum
		unit has limonite in joints
		15' lin limonite.
		5YR 2/1
		lignified wood frags
		in shale above
		10YR 7/6 mineral &
		gypsum
		15.4 leaf horizon
		A clay with many
		leaf frags
		color 5YR 6.5/1
		Bedded.
		Gyp. xl layers
		OCS. 4 monocot &

clay

Equisetum Trays:
16 wh color N 7.0
fr. c. 5YR 5/1
5YR 2/1. lime
[illegible]

17 - 5YR 2.5/1
CLAY - [illegible]
NO PLANT [illegible]
5YR 2/1 [illegible]
[illegible] lime.
at 17.2 17.7'

[illegible] part of lower
mbr.
wh [illegible] color chgs.
to 5YR 6/1
from [illegible] 5YR 6/1
[illegible] 5YR 6/1
[illegible] clay massive.

[illegible]
[illegible]
[illegible]
[illegible]

→ Sample J-26-1-1

✓

19.3 CLAY AS AT
18.2 EXCEPT
LIMONITE JOINT
FILLINGS
1 SCATTERED CHIPPY
SANDY LIMONITE CONCR.
SECTION INC.
10 YR 6 5/6
UPWARD AMT. OF
LIMONITE JOINT
FILLINGS INCREASE
W.H. COLOR AT 22'
TO 26' IS
10YR 5.5/6

21- SILTY CLAY
FR. COL. 5 Y 7/1
WITH [illegible]
MINUTE .5 mm [illegible]
[illegible]
22.5 MIXTURE OF
FR. INC.
CLAYEY SILT.
24- LIGHT GREY [illegible]
[illegible] 10YR [illegible]

[illegible]

[illegible] 10'5 [illegible]

[illegible]

26' [illegible] clay [illegible]

[illegible]

[illegible]

28' [illegible] clay [illegible]

28.5' [illegible]

Same [illegible]

[illegible] 28' [illegible]

5Y 8/1

29.5 10YR 5/2 V. [illegible] clay, (massive) [illegible]

mottled

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

31 Lignite layer
2" IN 5YR 2/1
with 10 YR 7/6
limonite coat +
stringers - carb
wood [illegible]
31.2' ~~very~~ SILTY
MASSIVE 5YR 3/1
CLAY ~~with~~ w/ Gyp X's
~~Wh~~ And carbon flays
Wh. C V-6
34.5 [illegible] 1"
with [illegible] PL. Rem
35 1" Lignite
5YR 2/1 c/ Lig. wood.

35.3 do. 34.5
with limonite
gyp. X's.

36.1 Wh. V-7
[illegible] limonite streak
[illegible] (10 YR 5/6)
fr. color 5YR 6/1
Sequoia mono, dicot.
Some carb. br. layers
Specs J. 26-1-5

[illegible]

27. Slightly [illegible]
[illegible] 24 [illegible]
[illegible] clay
with limestone
stained [illegible]
above [illegible]
wh. [illegible]
[illegible]
7/6 [illegible]
[illegible]
[illegible]
[illegible]
SITST. [illegible]
[illegible]
[illegible] 10 [illegible]
[illegible] with
Diant [illegible]
wh's [illegible]
43.5 [illegible]
[illegible]
[illegible]
[illegible]

✓

11H- 5YR 5/2 [illegible]
Clay with [illegible]
[illegible]
[illegible]
(-vendor [illegible])

[illegible] 2 [illegible]
5YR [illegible]
[illegible]
[illegible]

Adams Cliff lg
5YR 5/2 Sha with
some limonite
mottling &
much Sequoia-
[illegible]
Spec # J-26-1-3
poss caterpiller

[illegible]
A [illegible]
ledge of 10YR [illegible]
limonite cemented
SILTST. bearing
Sequoia Moundout
frags.

SAND

[illegible]

Shale [illegible]

52 - Clay [illegible] 52

Gyp [illegible] on [illegible]

[illegible]

53.6 Silty [illegible]

[illegible] 6/5 [illegible]

Some plant [illegible]

[illegible]

[illegible]

Slump

55.7 ~~SAND~~ Sand. [illegible]

CALCAREOUS

* WAVY [illegible]

with [illegible]

[illegible] SAND [illegible]

5Y 8/1

56 10YR 5/2 Clayey [illegible]

with limonite [illegible]

57 10YR 6/2 [illegible] 55

with plant

GRAYS [illegible]
[illegible]
SANDSTONE
SILT- 1ft. stained layer 1"
SILT Chippy [illegible] SH
5Y 6/1 with gypsum
& limonite [illegible].
Gyp x13

6A.1 5YR 2/1 LIGNITE.
6B.8. 10YR 4/2 SHALE.

6A.5 5YR 5/2 mottled
limonite v. silty
clay
[illegible] clay [illegible]
[illegible] 5/2

6S.5 5YR 5/2 [illegible] clay
[illegible]

67 V. SILTY CLAY do 6S.5
68 10YR 5/2 SILTSTONE
limonite on joint
faces
69 10YR 6/6 SILTS limonite
"1/4" ledge IN do 68.

73.5 [illegible]

[illegible]

[illegible]

face 23' to 73'

72 [illegible]

[illegible]

S.S. NON-[illegible]ED

72.5 [illegible] 1 foot [illegible]

of [illegible] slope

[illegible]

[illegible]

[illegible]

73.5- Glacial sandy

pebbly till

61 end of section

Soil top [illegible]

Glac till 72.

73.5

June 29, 1964

AT 154 of Acc. J-26-1

J-26-1-9

AT 50' J-26-1-11

AT 50'

AT 48' - J-26-1-10

Sec 1.-20-1

0

[illegible] of [illegible]

well indicated

fine [illegible]

GLACIAL [illegible]

THIS [illegible]

FEW [illegible] PLANT

SLOPE [illegible]

Sec J-30-1

20 [illegible] CLAY
5YR 5/1 with [illegible]
frags.

20.5 LIGNITIC ZONE consisting
[illegible] which
are bent & twisted
[illegible] of black
tiny [illegible]

22.8 Large zone 10YR 5/2
slightly silty CLAY
w/h. 10YR 8/1 10YR 7/1
[illegible] in joint filling.
Effervs [illegible]

23' dc' [illegible]
[illegible] zone of
1/2-1 mm cemented
[illegible] spherulitic con-
[illegible] outside.
150 5YR 4/4 5YR 4/6
[illegible]

[illegible] DISCONT. layer of [illegible]

Fossils:

See [illegible]

[illegible] should be [illegible]
[illegible] limonite
[illegible] e [5Y 6/1]
Outer surface somewhat
[illegible] skin [illegible]
layer of 10YR 5.5/5 limonite
[illegible]
~~10YR 5.5/5~~

[illegible] 5YR 3/1 Fissle shale
[illegible] limonite staining
wh 5Y 6/1 with [illegible]
[illegible]

Sh - N-5 with some
limonite staining
Fissle wh color 5YR 8-1

31.5 10YR 6/6 limonite
stained N-5 Sh.
1 IN layer
Prod. limonite chips in
[illegible] x/5.

31.6 Non fissle 5Y 6/1 clay
with some limonite ~~lch~~ stain

✓

[illegible]

[illegible] 10YR 4/2 [illegible]
gypsum [illegible]

[Fresh color of clay
above [illegible] is 10YR 6/4]

[illegible] 10YR 4/2 CLAY
[illegible] limonite [illegible] stain-
ing

43.5 - 10YR 5/4 SILTY
CLAY limonite STAINED
& WITH STRINGERS of
gypsum crs.

45 - 10YR 5/4 TO 5YR 6/1
SILTY CLAY - limonite
~~mottled~~ STAINED IN part

47 - SAME color VERY SILTY
MICACEOUS limonite STAINED
CLAY - ONE 1" layer STAINED
WITH MANGANESE SILT
gypsum IN BED.

48- 10YR 5/4
[illegible] SILTY [illegible]
some mg. STAINING.

49 S- 10YR 5/3 SILTST. MICA-
CEOUS bedded 1
[illegible]
vfg light [illegible]
[illegible]
Gyp xls.

51- 10YR 5/5/2 CLAYEY SILTST.
WITH 10YR 5/4 LIMONITE
STAINING [illegible]
[illegible] FISSLE.
MICACEOUS

10/6
54- 10YR 6/1 vfg CLAYEY
SUB rounded SS.
[illegible]

LATERALLY 2 ft ~~[illegible]~~
ledges of vfg
5Y 8/1 MICACEOUS (5%)
5YR 5/4 WEATHERED
SUBROUNDED 1/4 - 1/2"

bedded - Bedding is
ripple bedded with
beautiful, wonderful
[illegible] supercritical
ripple marks on bedding
[illegible]

E b SE

~~55~~

55 covered interval
brown sandy soil.

60 Glac. Till

62 End of section.

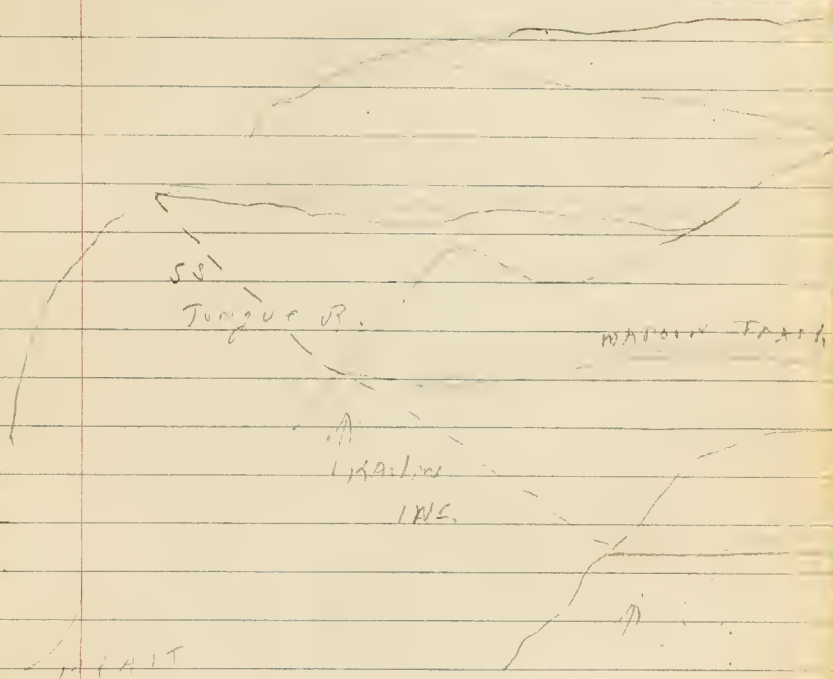
STRIKE
125° 15° S AT 0° Dec.
May be caused by
[illegible]

$d = 2 - 1 = 2$

$d = 3 - 1 = 3$

[illegible] point

Loc 1-1-1



Looking EAST

CONTACT of G.V. - FU
drops lower in spurs
INDICATING channel CONTACT

Sec 1 - 1 - 1

Sec 1 - 1 - 2

SE 1/4, SE 1/4, N, T 13N
R 96W.

Loc L-X-3

SE¼, Sec 13, T 139 N R 96 W

Golden Valley [illegible]

[illegible]

Loc L-1-4

Upper [illegible]

[illegible] yellow

[illegible]

Ledges [illegible] massive, [illegible]

so. with upper bedding

Golden Valley [illegible]

[illegible]

So. with [illegible]

[illegible] L-1-4-1

[illegible]

Log of well [illegible] alfa

[illegible]

+ Card file

Levels to [illegible]

20C SW [illegible]

20C L-1-5

SW $\frac{1}{4}$ 3C

97W

Hand [illegible]

to SW [illegible]

LOC 4-1-6

H S layer 3 yrs
small-drill - [illegible]
[illegible] could may be
[illegible] but [illegible]
coherent pavement in
places.
SW 1/4, SW 1/4, Sec 36 T 139N
R 97W.

H S falls 12 feet
above Silurian Kettle-
maker at LOC 4-1-5

LOC 4-1-7 NW 1/4 SW 1/4
Sec 36 T 139N R 97W

LOC 4-1-8 NE 1/4 NW 1/4, Sec 1
T 138N R 96W
[illegible] mbr below it.

LOC 4-1-9 [illegible] E bank of
[illegible] SE 1/4, SW 1/4 Sec 36

LOC 2-1-10

Hallelujah

Cure

Possibly

NE1/4, NW1/4, Sec 3 T 138N R 96W.

LOC 1-1

NE1/4, NW1/4 Sec 10, T 139N, R 96W.

July 2 -
Butte L-30-1 &
[illegible]

Then to Medicine [illegible]

RAIN.

July 3

Loc L-3-1

Top of Sentinel Butte
[illegible]
[illegible]
Partly [illegible]
with [illegible]
worm borings

All L-5 Nos. Should
L-6 1 be L-6

NW¼, NW¼ Sec 16 T136N
R 96 W.

L-6
White River ~~[illegible]~~ Chadron
[illegible]
SE¼, SE¼, Sec 13, T 13 N R 97 W.

L-6 [illegible]

L-6 7 NW¼ Sec [illegible]
[illegible]

(170) [illegible] ½" [illegible]
in a [illegible] [illegible]
[illegible] [illegible] to [illegible]
H S in float [illegible]
[illegible]

L-65 NW¼, NW¼ sec 23 T 138N
R 96W

Golden Valley [illegible]
[illegible] Cub [illegible] [illegible] 55
[illegible] [illegible] H S in float
[illegible] [illegible] [illegible] in
[illegible] [illegible]
[illegible] [illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]

L-66 NE¼, NW¼ sec 30 T 137N
R 97W - [illegible] V [illegible] Upper [illegible]
in good [illegible]
[illegible] sec 21-20
Good [illegible] in NE¼ sec 25 +
~~T 54~~ 137 N R 98W

Sec L-7-1

July 7, 1964

Loc - L-7-1
Medicine Butte Sec.

Height Above S'

F.V. base not exposed.

0' Slope wh 5Y 6/1 to 15 ft.
5Y 6/1 Fine lithic SS.

0.1 Lignitic Gypsiferous [illegible]
5R 2/2

0.4. 5Y 6/1 Vfg sub Arg SS
Unconsolidated

1.2 Lignite Gypsiferous
5YR 2/2 to 5YR 2/2

2. Bentonitic non lithified
medium sub rounded SS
5YR 4.5/2
blebs of 5YR 2/2 to 10YR 2/2 Carb. mat.

7' Limonite stained
do 2' SS with gypsum
10YR 6/6

[illegible]

0.5 SILTY [illegible] CLAY
[illegible]
[illegible]
[illegible] of [illegible] c/b limonite
Color [illegible]
[illegible] carb blebs
[illegible]
[illegible]
9/ [illegible]
[illegible] 1/4 [illegible]
some carb blebs

[illegible]
[illegible]
[illegible]
[illegible]
[illegible] CLAY
15.4 - Limonitic [illegible]
[illegible] 7/6 SILTST crusts
in [illegible]

15.5 [illegible]
Soil SILTST [illegible]
[illegible] - [illegible] SILTST
[illegible]
[illegible]
[illegible]

Sec 2-7-1

gypsum (white) efflorescences

20' Chips of white [illegible] siltstone (Hardened flint clay) which weather brown slope. Wh N9 fresh 5YR 9/1

[illegible] Lignite (N-1) with gyp xl. efflorescence [illegible] bedding & limonite staining [illegible]

Wh color [illegible] 5Y 9/1 from 22 TO 42.1

23 Bedded clay 5Y 4/1
Some areas of limonite
5Y 7/6 [illegible] gyp xls.
Poor direct [illegible]
[illegible]

27 5Y 4/1 slightly [illegible]
clay white gypsum
[illegible]
Thin 2-3" lenses of
5YR 2/2 outside iron stained
5Y 6/1 inside
silicified cones.

[illegible] 2-9-1

Sample [illegible]-1-1 [illegible]

[illegible] 1-7-1

[illegible]

31, 6 - 5Y 7/1 [illegible]

32, 6 - [illegible]/4

[illegible]

26 - very [illegible]

slight [illegible]

[illegible]

27 - 5Y 6/1 [illegible]

fissile

[illegible]

Sec 2-7-1

38' Conc layer

40- very silty
[illegible]

[illegible] layer

42.1 5Y 5/1 silty
slightly [illegible]
clay
wh color [illegible]
56.5
45.00 42.1 except less
silty

48. less bentonitic
than at 42.1 otherwise
do 42.1

50 - Final 5" ledge of
[illegible]

50.45 5Y 4/1 slightly fissle
shale with occasional
limonite blebs. 5Y 7/6

Sec 2-7-1

52

53

54

sec 2-7-1

61.1 SY 4/1 SILTY in some limonite staining.
do 61.1 except A SILT bedded.

64 Wh SY 4/1 Clayey SS. some limonite staining.

67 Lignite zone 2" STRINGER of SYB 4/1 Lignite interbedded with SYB 4/1 Clay pods of 10YR 6/6 Limonite in top 3"

67.7 Wh color of slope 10YR 8/4 - TOP.
Fg. SR - SUSR individual with some Agg XLS. & limonite pods.
1 OC conservat limonite staining layers in top effl.

Sec 2-7-1

[illegible]

76 - 77.4 [illegible] SR
[illegible]
SS. [illegible] 4
INDURATED [illegible]

77.4 fg. SR. [illegible]
limonitic SS.

82 [illegible]

84 G [illegible]
[illegible]
Sch.
[illegible]

86- [illegible]
[illegible]

sec 2-7-1

[illegible] of [illegible]
[illegible] (1/3 in) 5 YR 6/1
f.g. sr. carbonate r.
ss.

[illegible] to 84.

90 vf 10 YR 5/4 olive
ES. bedded 1/3"

90.8 1-2" layer of ~~[illegible]~~ brown
grey [illegible] [illegible]
[illegible]

92.7- 5YR 6/1 vf g
[illegible] [illegible] [illegible]
[illegible] grey bedded
[illegible]

95- top of [illegible]
bed [illegible]
[illegible] ss vy.
5YR 5/4 - on [illegible]
[illegible]

95.1 [illegible]
[illegible]

97. - 5YR 4/1 SILTST [illegible]

99

87.1

105.0

105

Thousand

below

SEC 1-7-1

GV?

109' STILL [illegible]
[illegible] SILT.
(MICACEOUS [illegible]) WITH
[illegible]
[illegible] MICACEOUS SILT
[illegible]

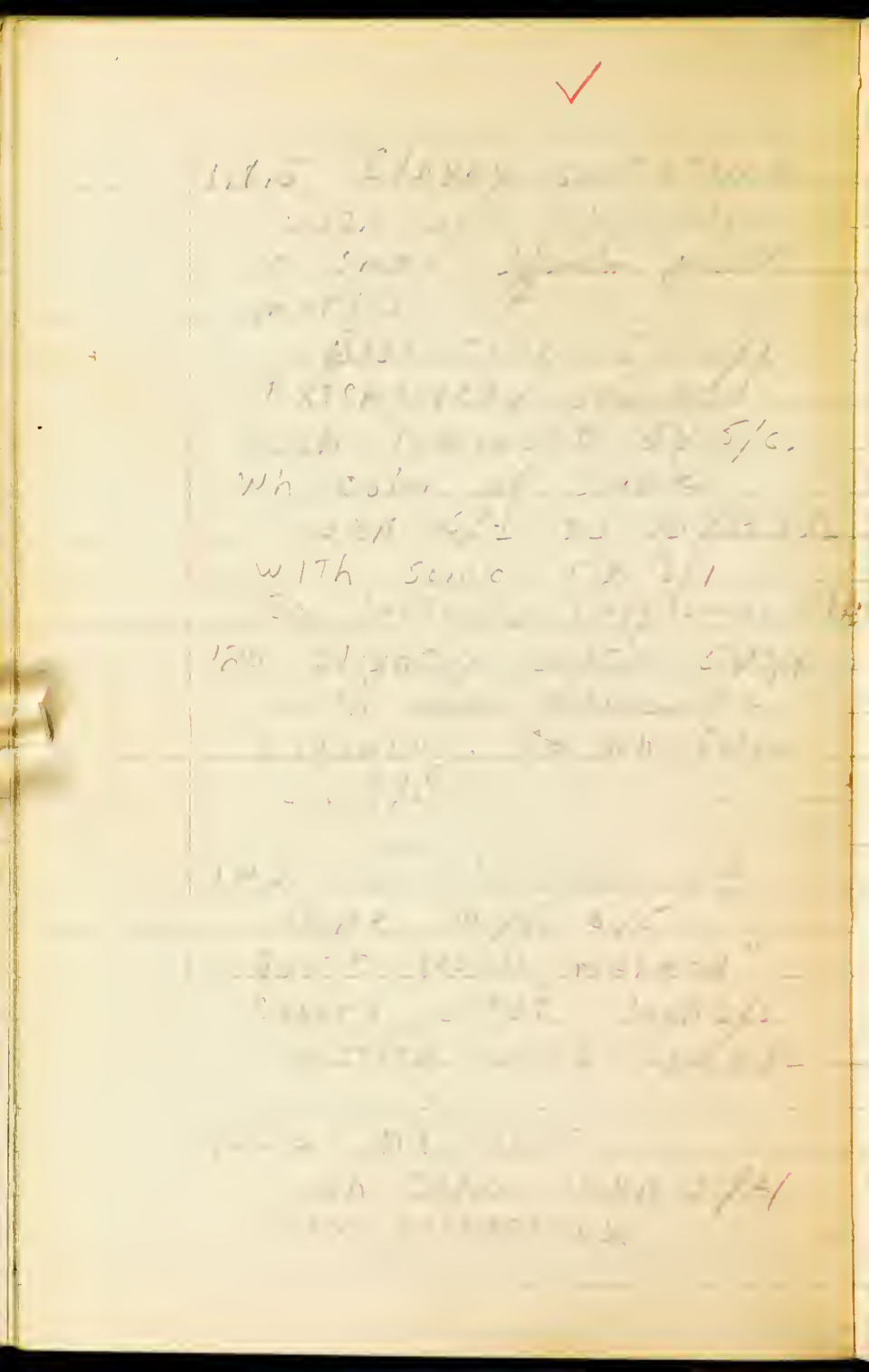
GV

112 [illegible] SILT
[illegible] SHALE WH COLOR
[illegible] 2/1

PLATE

[illegible] ~~SILTY~~ VFG SA
[illegible] ABT 1%
1/4 MUSC MICA FLAKES
N5 [illegible] 5YR 4/1 DEPENDING
[illegible] SILT MAT.

115 5Y 6/1 WITH MORE
[illegible] LIMONITE
[illegible]
WH COLOR NOW 5Y 8/1
FROM 115.5 TO 118.5
~~MICA~~ MICA ABT 3% FLAKES
GYP [illegible]



[illegible] layer of [illegible]
10YR 5/4 limonite
cemented siltstone
[illegible]

[illegible] PLATY somewhat [illegible]
5YR 4/1 ~~shale~~ CLAY
[illegible] 5YR 4/1

12'- PLATY sh [illegible] 12'
[illegible] 10YR 5/3

12'- Limonite [illegible]
slightly silty [illegible]
[illegible] 10YR 5/4 shale

12'- [illegible] platy [illegible]
5Y 5/1 slightly
[illegible] stained
[illegible] PLAY
limonite [illegible]
[illegible]
slightly silty.
Sequoia frag.
surface vfg SS
outwash 5Y 7/2 ~~TO~~

SCALE 1:1

from 120 TO 150

limonite [illegible] in
some layers.

131 10YR 6/4 MICACEOUS [illegible]
SLTST.

131.5 well indurated laminated
carbonate rich [illegible]
wh [illegible] carbonate
micaceous [illegible] vf ss.
laminations [illegible]

132.17 [illegible]
SLTST. [illegible]
[illegible]

135.5 10YR [illegible] 6/1
laminated [illegible] SA
micaceous [illegible] laminations
[illegible]
[illegible] d. [illegible]
limonite [illegible]
[illegible]
[illegible]
[illegible] 3-4 to

- 144.5 2" [illegible] [illegible]
10 YR [illegible] LIMONITE
STAINED layer

144 - [illegible] HZ
10 YR [illegible] LIMONITE [illegible] STAINING
[illegible] 10' 135.5

145.5 LIMONITE STAIN

146. do 135.5 (34)
[illegible] - 146. MICA SHALE
PLATEY CLAYEY 10 YR 5/4
SS. [illegible] CREAT[illegible]

148.2 DISCONTINUOUS [illegible]
[illegible], MICACEOUS HZ-SD
fg. SA, 10 YR 7/4 CARBONA[illegible]
[illegible] SS

150 150 to [illegible] - [illegible] 5/1
[illegible] SLDC

150 - do 135.5 SS WITH
[illegible] STAINING
153 - do 150

128	2011			
	113			212
				214
174				217
171	192	207		222

232 - End of Core [illegible]

[illegible]

5YR 7/6 medium

S.P. non bedded

(MASSIVE) CARBONATE

CEMENTED SS with

[illegible] 1% large [illegible]

[illegible]

CARBONATE CEM

well indurated cliff

236.5 F.G. Angular

5YR 7/6 MICACEOUS

1% flakes

carbonate cem

obscurly [illegible]

[illegible] Slap 2-7-1-4

Medium
carb. cement and
much black mica
mica also as

[illegible]

[illegible] USUAL [illegible]

[illegible] A ALT [illegible]
OTHERWISE [illegible]

[illegible] 10" TOP OF BATTC
[illegible] OF [illegible]

all

Comp at 0 ded.

125	a dir	125°
122		122°
122		122°
115		115°
123		123°
115		115°
120		120°
122		122°
122		122°
120		120
122		122°
114		114°
123		123°
122		122°
123		123°
129		129°
119		119°
128		128
120		120°
132		132°
121		121°
143		143
137		137

41	[illegible]	[illegible]	122	[illegible]	25	C	115
[illegible]	[illegible]	[illegible]	120	[illegible]	56	[illegible]	146
[illegible]	[illegible]	[illegible]	136	[illegible]	55	C	145
[illegible]	[illegible]	[illegible]	134	[illegible]	65	[illegible]	153
[illegible]	[illegible]	[illegible]	122	[illegible]	43	[illegible]	133
[illegible]	[illegible]	[illegible]	124	[illegible]	[illegible]	C	124
[illegible]	[illegible]	C	138	[illegible]	[illegible]	[illegible]	87
[illegible]	[illegible]	[illegible]	123	[illegible]	[illegible]	C	125
[illegible]	21	C	111	[illegible]	[illegible]	[illegible]	123
[illegible]	[illegible]	C	114	[illegible]	[illegible]	C	101
[illegible]	[illegible]	C	140	[illegible]	[illegible]	[illegible]	115
[illegible]	[illegible]	[illegible]	127	[illegible]	24	[illegible]	124
[illegible]	[illegible]	[illegible]	138	[illegible]	[illegible]	[illegible]	123
[illegible]	[illegible]	[illegible]	123	[illegible]	[illegible]	C	124
[illegible]	[illegible]	C	126	[illegible]	33	C	123
[illegible]	53	C	143	[illegible]	25	[illegible]	115
[illegible]	41	C	131	[illegible]	54	C	143
[illegible]	[illegible]	[illegible]	130	[illegible]	[illegible]	C	123
[illegible]	20	C	120	[illegible]	[illegible]	C	129
[illegible]	[illegible]	[illegible]	112	[illegible]	[illegible]	[illegible]	133
[illegible]	[illegible]	[illegible]	127	[illegible]	[illegible]	C	154
[illegible]	[illegible]	[illegible]	118	95	[illegible]	[illegible]	140
[illegible]	[illegible]	[illegible]	119	[illegible]	[illegible]	[illegible]	108
[illegible]	[illegible]	[illegible]	137	[illegible]	[illegible]	[illegible]	150
[illegible]	53	C	143	[illegible]	[illegible]	[illegible]	133
[illegible]	36	C	126	[illegible]	53	[illegible]	143
[illegible]	57	C	147	[illegible]	54	[illegible]	144

129	142
127	107
123	151
122	121
133	147
145	116
144	113
130	127
141	128
131	121
131	128
133	122
128	130
141	130
124	130
127	119
138	130
126	123
142	140
108	152
119	105
134	100
137	101
137	95
120	109
134	101
114	26

				94					106
				135					157
				96					105
				99					164
				110					101
				102					124
				115					126
				89					107
				110					123
	NW	15		75					96
				101					135
		10		100					140
				104					111
				98					128
				131		24			119
	NW			86					114
		12		102		34			124
		33		123					112
		31		121					112
				101		43			133
		14		104		37			127
				77					173
		15		105					151
		14		104					145
		17		127		35			175
		23		113					124
				98					153

	126	79
	145	87
	121	75
	132	71
	141	86
	143	57
	130	102
	128	60
	125	57
	128	97
	144	103
167		81
	135	102
	145	107
	157	69
	153	90
	160	110
	158	95
	135	73
	121	89
	119	101
	90	102
	123	103
	133	105
	10	84
	107	115
	101	119

flat t : 2

[illegible]	E	110	[illegible]	E	46°
[illegible]	E	90	[illegible]	[illegible]	118
[illegible]	[illegible]	112	[illegible]	E	57°
[illegible]	[illegible]	70	[illegible]	E	90°
15	E	105	165	E	75°
32	E	122	[illegible]	E	103
NW 47	E	45°	[illegible]	E	108
24	E	114	NW 5	E	85
NW 27	E	63°	10	E	10
19	109	E	[illegible]	NW 14	E	76
NW 30	E	60°	NW 20	E	70
1 [illegible] 11	E	79°	25	E	115
11	E	101	17[illegible]	E	80
[illegible]	E	110	172	E	82
[illegible]	E	78°	17[illegible]	E	83
15	E	105	[illegible]	E	90
[illegible]	E	116	[illegible]	E	86
[illegible]	E	10°	[illegible]	E	86
13	E	103	17[illegible]	E	81
[illegible]	E	104	17[illegible]	E	87
14	E	104	[illegible]	E	83
16	E	106	[illegible]	E	89
NW 10	E	80	[illegible]	E	118
40	E	130	[illegible]	E	99
83	E	173	34	E	84
NW 18	E	72°	10	E	100
NW 67	E	23°	[illegible]	E	85

			98					113
			71					94
			20					118
			72					94
			30					111
			28					87
			91					[illegible]
			79					[illegible]
			106					[illegible]
			96					[illegible]
			120					[illegible]
			93					94
			[illegible]					[illegible]
			[illegible]					95
			124					98
			109					85
			129					179
			110					158
			124					164
			146					165
			98					[illegible]
			[illegible]					148
			104					142
			110					142
			117					97
			106					152
			102					170

311	87	E	177	[illegible]	N[illegible]	E	89
312	58	E	148	[illegible]	35	E	125
[illegible]	[illegible]	[illegible]	161	[illegible]	[illegible]	E	142
[illegible]	2[illegible]	[illegible]	118	[illegible]	20	E	110
[illegible]	67	E	157	[illegible]	[illegible]	E	107
326	30	E	129	[illegible]	11	E	101
[illegible]	55	E	145	[illegible]	359	E	89
[illegible]	[illegible]	E	119	[illegible]	NW 65	E	25
[illegible]	36	E	126	[illegible]	0	E	90
[illegible]	64	E	154	[illegible]	2	E	92
[illegible]	35	E	165	[illegible]	[illegible]	E	95
[illegible]	52	E	142	[illegible]	[illegible]	E	158
[illegible]	[illegible]	E	153	[illegible]	11	E	101
[illegible]	NW 14	E	76	[illegible]	[illegible]	E	104
38	[illegible]	E	95	[illegible]	[illegible]	E	128
[illegible]	[illegible]	E	116	[illegible]	[illegible]	E	141
[illegible]	5	E	95	[illegible]	[illegible]		55
[illegible]	0	E	10	[illegible]	[illegible]	E	120
[illegible]	[illegible]	E	102	[illegible]	[illegible]	E	137
[illegible]	[illegible]	E	122	[illegible]	0	E	90
[illegible]	[illegible]	E	102	[illegible]	[illegible]	E	134
[illegible]	45	E	135	[illegible]	[illegible]	E	106
[illegible]	[illegible]	E	107	[illegible]	[illegible]	E	103
[illegible]	[illegible]	E	105	[illegible]	[illegible]	E	88
[illegible]	45	E	135	[illegible]	35	E	90
[illegible]	[illegible]	E	135	[illegible]	[illegible]	E	85
[illegible]	33	E	123	[illegible]	[illegible]	E	133

63	L	153	[illegible]	8	L	98
51	L	146	[illegible]	4	L	94
10	L	100	[illegible]	5	L	95
21	L	111	[illegible]	2	L	92
75	L	175	[illegible]	[illegible]	L	100
86	L	176	[illegible]	[illegible]	L	[illegible]
14	L	104	[illegible]	[illegible]	L	18
[illegible]	L	177	[illegible]	[illegible]	[illegible]	104
[illegible]	L	100	[illegible]	25	[illegible]	115
[illegible]	SW	20	[illegible]	[illegible]	L	113
[illegible]	L	113	[illegible]	[illegible]	L	93
[illegible]	L	98	[illegible]	6	L	[illegible]
[illegible]	L	90	[illegible]	[illegible]	[illegible]	162
5	L	95	[illegible]	[illegible]	[illegible]	155
[illegible]	L	64	[illegible]	[illegible]	[illegible]	145
NW [illegible]	L	67	[illegible]	[illegible]	[illegible]	135
[illegible]	L	64	[illegible]	[illegible]	[illegible]	133
[illegible]	[illegible]	102	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	L	95	NW [illegible]	[illegible]	L	82
6	L	96	[illegible]	[illegible]	[illegible]	65
18	L	108	[illegible]	[illegible]	[illegible]	81
23	L	113	[illegible]	[illegible]	[illegible]	67
NW [illegible]	L	88	NW [illegible]	[illegible]	L	85
5	L	95	[illegible]	[illegible]	L	116
6	L	96	[illegible]	[illegible]	L	99
NW [illegible]	L	89	[illegible]	[illegible]	[illegible]	104
7	L	97	[illegible]	[illegible]	[illegible]	112

75		165
15	L	105
18	L	108
12	L	102
25	L	115
27	L	117
20	L	110
16	L	106
NW 12	L	78
150	N	20°
NW 16	L	74°
12[illegible]	L	81
12[illegible]	N	38°
NW 15	L	75°
123	N	13
20	L	110
17[illegible]	L	83
186	L	96
2[illegible]	L	132
25	L	115
1[illegible]	L	79
[illegible]	L	137

July 10, 1904

NE¼, NW¼, sec 3, T 138 N, R 96 W.
Am road bank on c.o.

SECTION L 10-1

0' Concealed prob G.V.
Lower Mbr

.5 5YR 6/1 SILTY Blocky
Clay
10YR 6/6 [illegible] STAIN
of [illegible]
[illegible]

2 5YR 6/1 SILTST, with
some [illegible] [illegible]
MOTTLING.

2.[illegible] [illegible] Silty [illegible]
SILTSTONE layer with
[illegible]
[S.G.] [illegible] MERGES [illegible]
of lower Mbr

[illegible]

[illegible]

7.5. [illegible]

11.5 [illegible] 7Y [illegible]

10 YR 7/4

[illegible]

[illegible] through horiz.

[illegible]

[illegible] layer

10 YR 6/6

7.3 [illegible] 5YR 6/2 [illegible]

later on top.

Lim. 5YR 8/4 to

5YR 5/6

14.5. Clay [illegible] with

limonite stain [illegible]

- 10-1

14 [illegible]
[illegible] SILTY CLAY
([illegible]) [illegible]
[illegible]
[illegible]

20 SITST ([illegible])
[illegible]
[illegible]

20. [illegible] [illegible] CLAY
[illegible]

20.4 — [illegible] [illegible]
Lignite layer [illegible]
[illegible]
[LOCAL [illegible]
[illegible]

[illegible]

[illegible]
[illegible]
[illegible]
[illegible]
[illegible]

[illegible] 1-10-1-1

July 11 Touling

L-11-1 Jasper [illegible] in of [illegible]
in slab [illegible] not [illegible]

SE 1/4, SE 1/4, Sec 5, T 14 ON R 88 W
W. Morton Co.

L-11-2 NE 1/4 [illegible] T 14 ON
R 88 W Silicified
Grey [illegible] Boulders
[illegible]
[illegible]
Items [illegible]
[illegible]

prob HS dropped down

L-11-3 [illegible]
[illegible] to [illegible]

SW 1/4, Sec 1, SE 1/4 Sec 2, E. Sec 11, W Sec 12
T 14 ON R 89 W. W. Morton Co.

L-11-4 [illegible]

SW 1/4, SE 1/4, Sec 6, T 14 ON R 89 W W. Morton Co.

L-11-5 - G.V. [illegible] on
Butte [illegible] NW 1/4, NE 1/4 S. 6 T 14 ON
R 89 W
Exposes [illegible] lig.
Clinker [illegible] gulley

H

L 11-9

[illegible] L.m

CONTACT [illegible] exposed

[illegible]

massive [illegible]

[illegible] L.m

~~NW~~, Sec 1, T140N R, 90W.
NE

L 11-10 [illegible] looking GV

[illegible]

L.m [illegible] much white in it

[illegible] CONTACT

exposed

V mbr [illegible] much grass

SE, SE, Sec 2, T140N R 90W.

L 11-11 SW¼, NE¼ + Sec 11 T

[illegible] R 90W

L.m, GV. U.m, GV

[illegible]

[illegible] inside [illegible]

[illegible]

Hypothetical

Changed

SECTION

Lower

Exp.

July 13, 1964

Sec L-13-1 LOC L-13-1 SW¼, NE¼ sec 6

TWO [illegible]

FU

C [illegible] 5/6

[illegible] baked [illegible]

[illegible] above [illegible]

[illegible]

[illegible]

[illegible]

5YR 4/1 bedded sh with

pods [illegible]

10YR 8/6 [illegible]

layers of [illegible]

[illegible] 5YR [illegible]

6.2 [illegible]

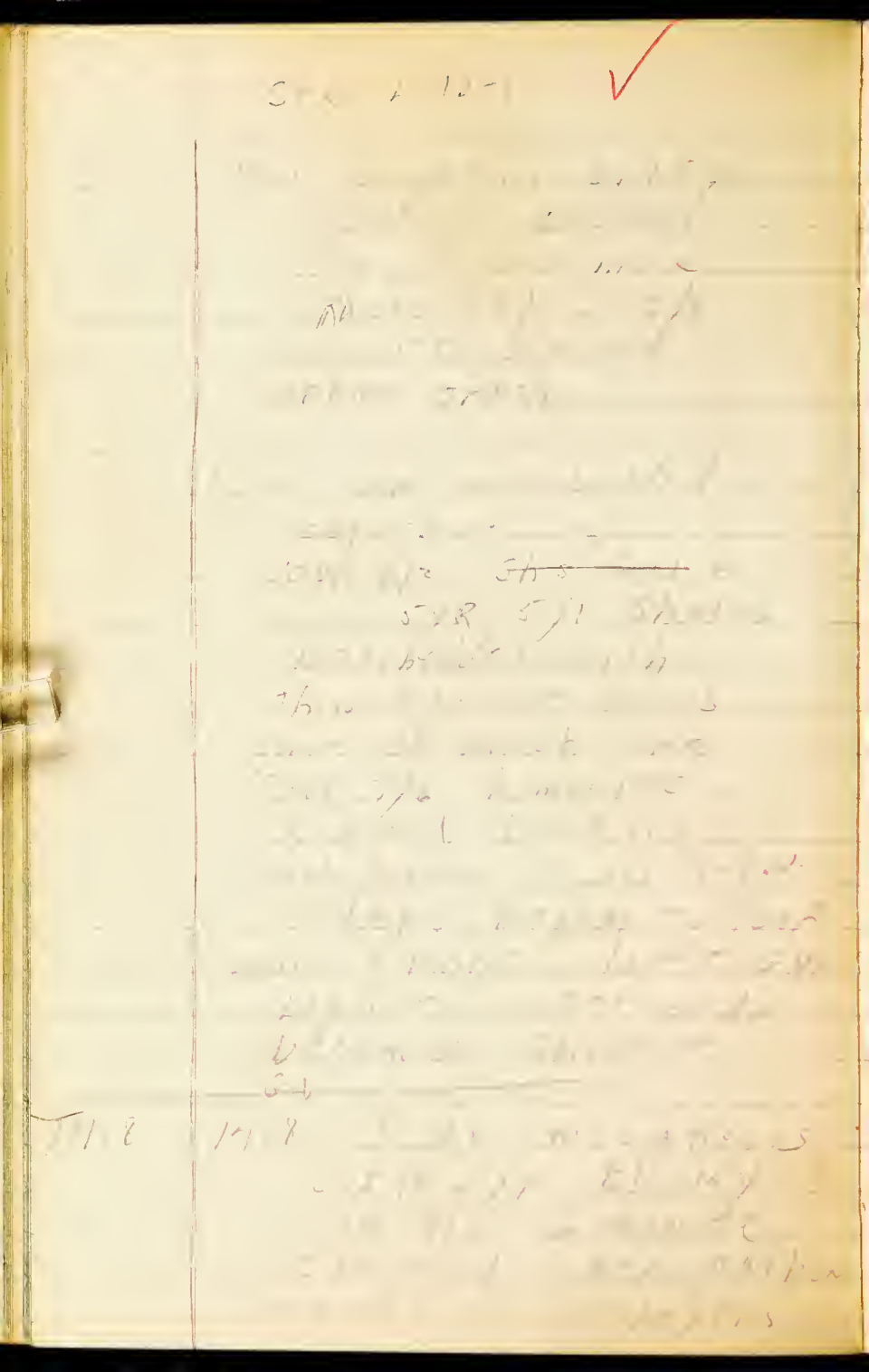
Prob [illegible]

[illegible]

14 [illegible]

5YR 4/1 with pods

of 5YR 2/1 hyalite



sec 1-13

15. [illegible]

[illegible] fine
[illegible] with
[illegible] 5/6 limonite
stained [illegible]
DICOTS [illegible]

1 3" [illegible] layer
[illegible]
N-1 [illegible]
some gyp & limonite
stained
16 [illegible] very
1/2 [illegible]
[illegible]
Medusoid
Sequoia

18 [illegible] medium bedded
[illegible] with some
[illegible] reflow
[illegible] 5YR 6/6 limonite
stained
[illegible] 5YR 6/1

from 15 to 24

Sec 1-11-1 ✓

SEE [illegible]

[illegible]

[illegible] but [illegible]
[illegible]

28. [illegible]
[illegible] mass of
[illegible] mixture
[illegible]

29. [illegible] mixture
[illegible]

[illegible] 29.5 to 27.7 [illegible]
[illegible] of
[illegible]
[illegible]

~~[illegible]~~
[illegible] powder [illegible]
[illegible] with
[illegible]
~~[illegible]~~ [illegible]

See L-13-1

34. Very fissile 10YR 5/2
somewhat less sh.
crumbling out in very
thin plates
overs 10YR 4/2
few gx p. 1's

42. fissile but NOT platy
5Y 6/1 sh.
slightly micaceous.

Wh color N5/ 5YR 5/1
5/7

44. 5/1 Blocky
very silty clay
with limonite staining
5/6

very clayey silt
some limonite st
5/6 1's.

49. 4 mottled
5Y 5/1
very silty micaceous
10% with 10YR 5/6
limonite staining.

V

[illegible] 2

~~[illegible]~~

Concerning Glacial
Boulders [illegible]

End of Section [illegible]
[illegible]

-1
0

7.2

91 Clay balls

13.3 [illegible]

Also 1 a layer of
5YR 6/6 Limonite cemen
its 1 carb. dash.
with gyp.

Upper Mbr.

19 5YR 4/1 micaceous
black limonite
stained shale

19.1 5Y 6/2 A micaceous
irregularly laminated
micaceous (-5%) sist.
with layers of [illegible]
limonite staining
[2"-3"]

21.8 Platey, massive very
micaceous (-5%)
silty clay
Gypsum is [illegible]
[illegible] 5Y 5/2
23 Clay no silt
less mica [illegible]
[illegible] do at 8

38.8 [illegible] [illegible]
[illegible] becomes
[illegible] with
[illegible] SVA 5/1

32- [illegible]
[illegible] [illegible] [illegible] sh.

*33.3 A 1" layer of limonite
cemented [illegible] 5/4
(sh) platy [illegible]
[illegible] [illegible] (ins.)
[illegible] [illegible]

33.4 [illegible]
[illegible]
[illegible] Pockets of
limonite [illegible]
[illegible]
[illegible] [illegible]
[illegible]

36.5 [illegible]
cross [illegible] [illegible]
Vfg SA 5Y 8/1
KAOLINITIC SS.
[illegible] 38

MILACEOUS [illegible]
WITH LIMONITE [illegible]
AVG SPHERES 2"

[illegible] CHAFFY TUFFACE SILTY
GROW LIMONITE
[illegible] SH
10YR [illegible]

42 - BLOCKY MILACEOUS
SILT [illegible]
[illegible]
WITH LIMONITE
AVG SPHERULES

43 - CLEAN [illegible] SAND FRAGS
RICH [illegible]
[illegible] SILT [illegible]
SS - SOME LIMONITE
STAINING

44 - [illegible]
[illegible] LIMONITE
VERY PLATEY [illegible]
[illegible] SS
[illegible]
WITH [illegible] SH

✓

HG. 2 do 37' sand soil
sand with much carb
mat

HG. 4 do 37' SAND & YELLOW
LIMONITE [illegible]

[illegible]
HG. 7 INTO A 40' SAND
SHALE WITH
wood frags FERN.
[illegible]
→ SALVINIA SMALL
[illegible] swamp [illegible]

[illegible] LIMONITIC [illegible]
[illegible] PLASTIC [illegible]
5YR 3/2 LIMONITIC
STAINED 10YR 7/6

46. LIMONITIC PLASTIC FISSILE
CH. 5YR 3/3

47. BEDDED [illegible] PLASTIC CH
5YR 3/4 [illegible] SOME [illegible]
LIMONITE STAINING &
MANGANESE [illegible] [illegible]
JOINT [illegible]
CONT. LARGE [illegible]

[illegible]

51 - NO [illegible]

52 - [illegible] PT
[illegible] LIMONITIC
[illegible]

54 - 5YR 4/1 FISSILE
SLIGHTLY [illegible]
CLAY

Sh.

10YR 6/6 limonite pocket

NE 1/4, Sec 1, T 140 N, R 90 W.
H. Morton Co.

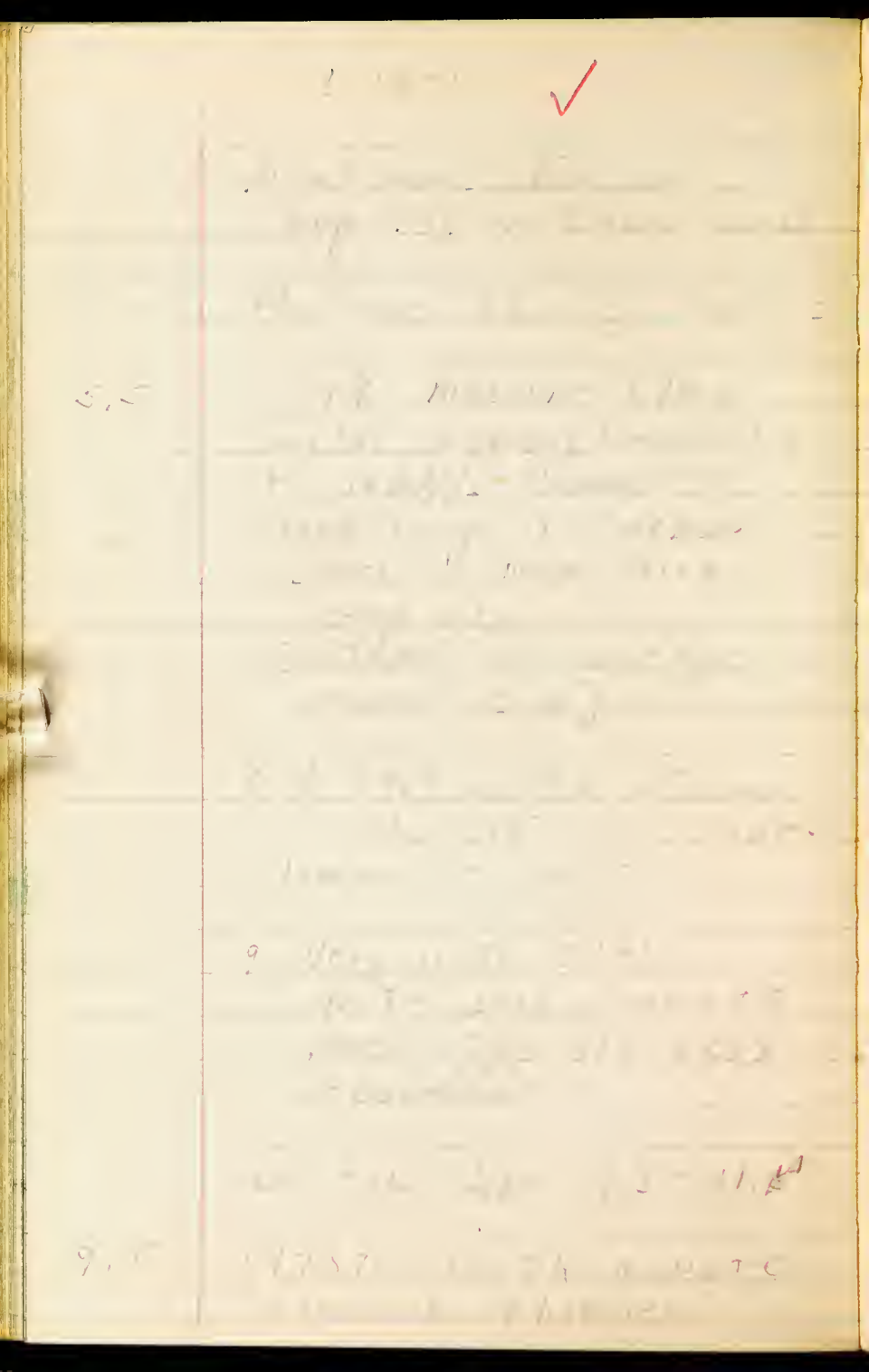
Mines for Harrison Lig. Ake
E.V.

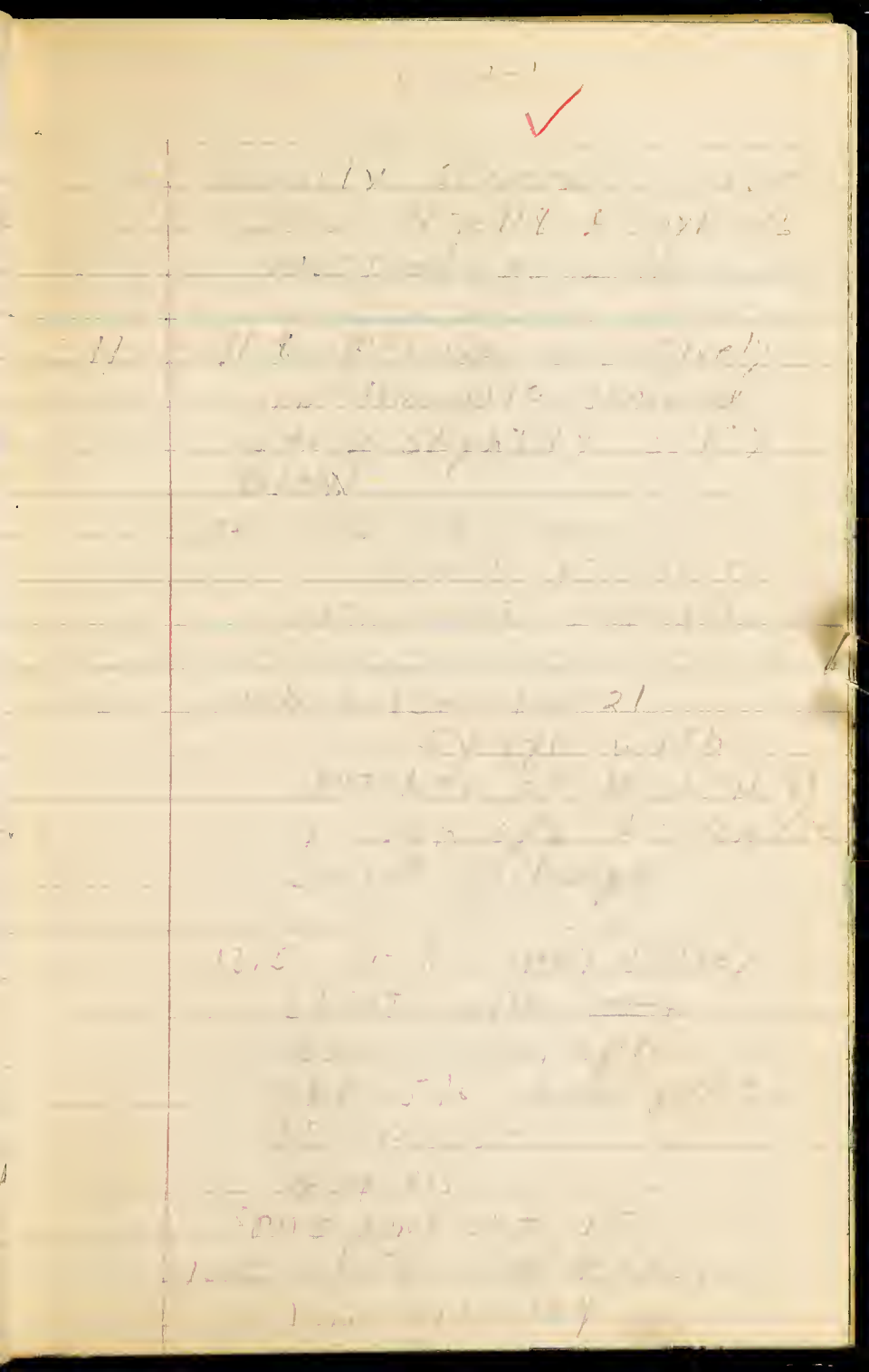
Prob. A fault
Below this

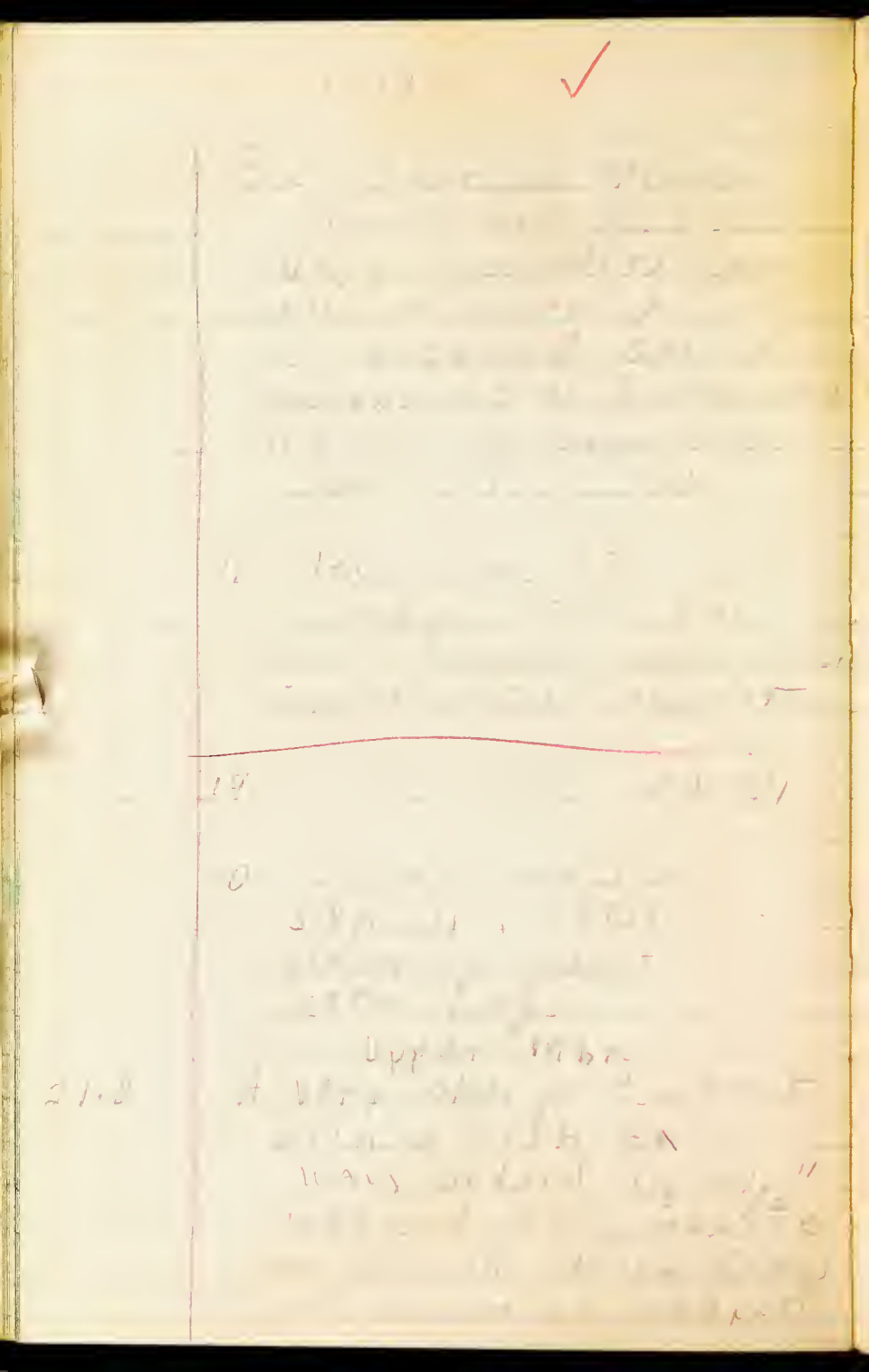
Section starts

not exposed.

NB 1 1/2 - 5 1/2







[illegible]

[illegible] with [illegible]
[illegible]

[illegible]

[illegible] vfg, [illegible]
[illegible] [illegible]
[illegible] CARBONATE [illegible]

OCC. [illegible] indurated
ledges

~~32~~ 27'
[illegible]
[illegible]
[illegible]
[illegible] indurat[illegible]

30'
[illegible]
32 [illegible] 27'

[illegible]

EOS.

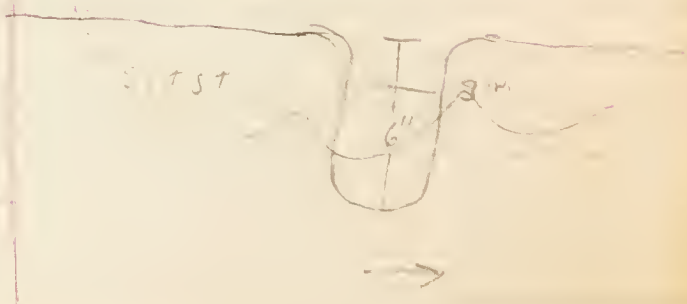
AT 21.5 A UNIO IN SS
WITH PLANT FRAGS
& CHARCOAL.

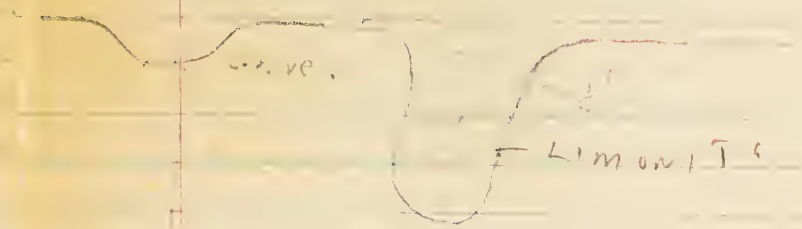
[illegible]

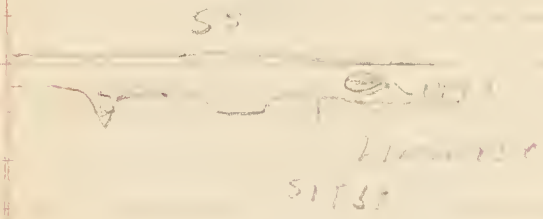
Some [illegible]
[illegible]
CAVITY [illegible]
[illegible]
with [illegible]
[illegible]

Bottom of [illegible]
channel with
pot holes [illegible]
into [illegible]
[illegible]
to the
conical [illegible] tube
shape [illegible]
heavily [illegible]
[illegible]

SS.







LIMONITE layer
very [illegible]
[illegible]

PART of SS is very
well [illegible]

Some is [illegible]

1

1 - 14 - 1 - a

SMALL AREAS

L 14-1-1
Fossils from

21' Cor [illegible]
1 Small [illegible]
Not [illegible]
[illegible]

L 14-1-2
Plants from [illegible]
level
[illegible]

[illegible]

[illegible]

[illegible]
Gr Dip.
4' [illegible]
[illegible]

LOCALITY

L-14-2

S½ SE¼ Sec 14 T 139N R 91W.

Lower mbr Clayey G.V.

Shot 10' outcrop near road.

LOC L-14-3

All NE¼ Sec 22

T 139N R 91W.

A section of G.V. in upper H. side of Lone Butte

Does not look good for Mea sec. but sec.

LOC. L-14-4

Lump of G.V. H. of Butte

S½ SE¼ SE¼, Sec 17, T 139N

R 91W.

L-16-1

Door of [illegible] pattern
[illegible]
[illegible] 139 [illegible]

[illegible]

[illegible] Covered
[illegible]
[illegible]
[illegible]
Lower [illegible]

3 [illegible] MASSIVE
[illegible]

4' 10 1/2 5/4 [illegible]
[illegible]
[illegible]

5,5 10 [illegible] Chipped [illegible]
wh 15 1/2 [illegible]

[illegible] Chipped
[illegible] with
[illegible]

7.2 - 534/4 [illegible]

[illegible]

10' [illegible]

[illegible]

1.5 10B512 [illegible]

[illegible]

[illegible]

[illegible]

1.5 55/2, [illegible]

[illegible]

[illegible]

[illegible]

In certain leaves

red is [illegible]

green with yellow

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

20 feet thick.

120 feet.

N-9 will probably 1½-2'
[illegible] flat [illegible]

[illegible]

[illegible] SA [illegible]

[illegible]

[illegible]

35 [illegible]

35

46

210

180

201

[illegible]

[illegible] MONR [illegible]

POOR exposure [illegible]

Lower [illegible] brown
fissle [illegible]
with some [illegible]
Then [illegible] for grey
clay
capped by 25' [illegible]
[illegible] CARBONATE
[illegible]

Br[illegible] [illegible]
with [illegible]
PLANT [illegible]
[illegible]

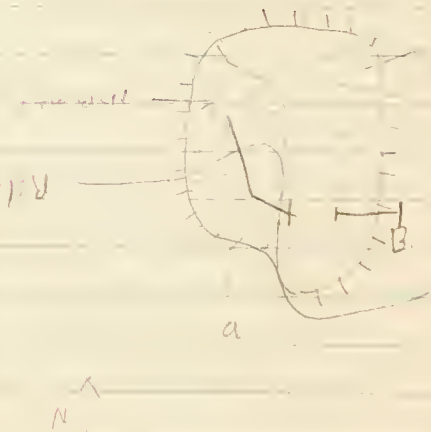
5' GREY MASSIVE CLAY
[illegible]

IV

[illegible] WITH [illegible]
[illegible] IS [illegible]

Edition of [illegible]
AS [illegible]
[illegible]
[illegible]

NW ¼, Sec 11, T140N, R90W
H. Morton Co.
Clay Pit of Hebron Brick Co.



[illegible] - 2

F.D.

5' [illegible]

Limestone [illegible]

Lignite

[illegible]

[illegible] Fig (Same [illegible]) very

clayey SA [illegible] 6/2

[illegible]

AT [illegible] Lignitic

partings [illegible]

[illegible]

[illegible] Lignitic [illegible]

clay [illegible]

[illegible]

(FIG [illegible])

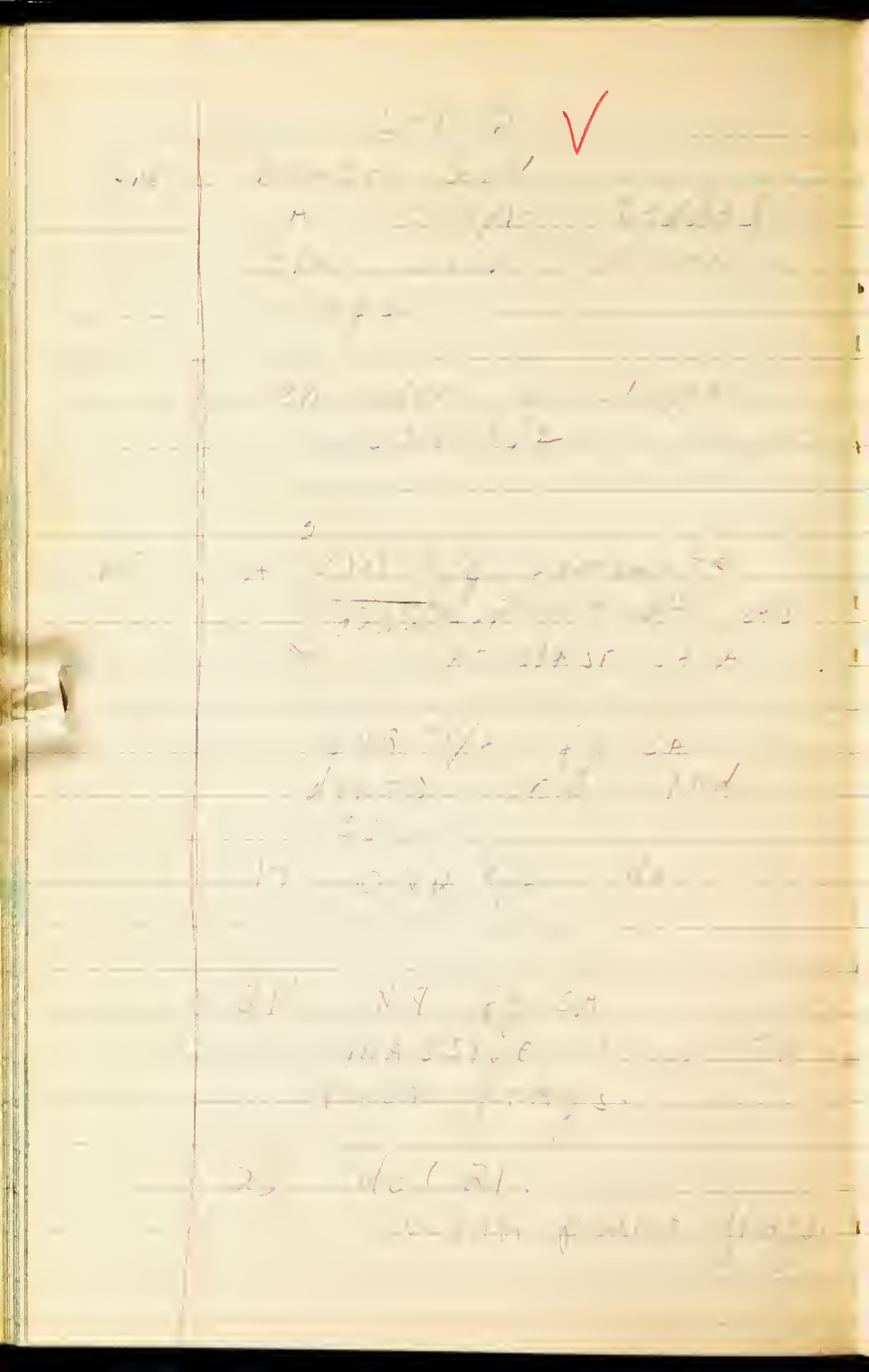
BASE of [illegible] with Mercenaria

[illegible] Nodules

1 - 4"

[illegible]

[illegible]



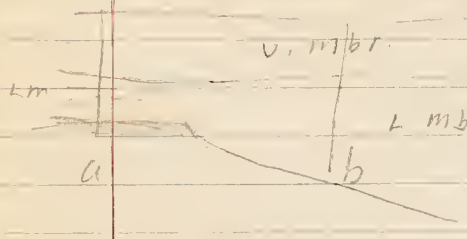
L-17-2

23.7 A massive N6, Limonite mottled (10 YR 6/6) SLTST.

25 End of section
Here section
is disturbed by
slozing. Upper Mbr
A' AT L-17-2-b

Sec L-17-2-b

The CHANNEL



Bedding of channel
dips NE 69° At 13° east.

0'

12' SYB 7/1 Bedded
micaceous 13
V f g KAOLINITIC
SILTY SS

[illegible]

18' [illegible]
[illegible]
occasional [illegible]
no [illegible]
through [illegible]

27' [illegible]
[illegible] but [illegible]
Bedded [illegible]

30' [illegible]

[illegible]

36' [illegible] 27'
but [illegible]
[illegible]
[illegible]

[illegible]
[illegible] very [illegible]
top 1/2'

1-17-2-b ✓

39 10YR 5/2 SILTY, fissile
very thin bedded
CLAY with poor
monocots & dicot flags.

41 FG to Silty micaceous
170 poorly indurated
slightly carbonate
SS. Bedding irreg
There are flattened
well indurated ledges
of carb cemented ss,

SS wh 10YR 6/6
fresh also 10YR 6/6

44.5. 5Y 7/1 fg *
Non micaceous Kaolinitic
Un indurated SS.

wh 10YR 7/2

50 - Ledge of fg SA
5Y 5/1
micaceous
well indurated

L-17-2-a

PLANTS FROM
Upper MOR SU
SO AS [illegible] ABOVE
25' IN SEC
L-17-2-a

Sec. 2-17-3

Center Sec 6 T140N R90W.
H. Morton Co

0 | Soil FD. Zone Dark Stained 10YR 6/6 and with [illegible] Burned [illegible] of [illegible] Zone

2 | Shale 5YR 4/4, Fissile Little thinly lam. a Bears [illegible]

4 | Fl SA [illegible] a-few Concretions Mottling [illegible] 5YR 4/4

Lh Color 0- Base [illegible] 2/1 Many Cut frays on Bed pls

EQUISETUM FLUV.

Especially core

19.5 TRANS TO ORANGE
N.C.S. BLOCKY, MASSIVE
V. slightly silty clay

21.1 SYM c/s SILTY
[illegible] clay
BEARS [illegible]
cemented mass of
[illegible] spheres
[illegible]
all faces

23 [illegible] KALAMAZOO
[illegible]

25 SILTY CLAY N-9
WITH [illegible]

26 N-9 BLOCKY MASSIVE

✓

[illegible] THIS [illegible]
SILT [illegible]
[illegible] IS [illegible]

LATERALLY AT [illegible]
[illegible] PORTION [illegible]
10 YR 6/6 [illegible]
[illegible] VERY [illegible]
[illegible]

LAST FOUR [illegible]
[illegible]
Upper Mbr.

36.1 VERY [illegible]
[illegible]
[illegible] 10 YR 6/6 [illegible]

36.2 10 YR 6/2 MICACEOUS [illegible]
[illegible] LAY

[illegible]
[illegible] 10 YR 4/4

36.8 SILT [illegible]
[illegible] ACEOUS [illegible]
[illegible] PLAT [illegible]

No M-1 LIMITS [illegible]
OBS 5/4 LIMITS VERY
LOSSY [illegible]

35'

SD = Gold MILACEOUS Iron
Bedded plant fossil
Bearing CLAY
Heavily limonite
stained in places

SILTIER AT SD.

[illegible]

S[illegible] very [illegible]
[illegible] 5/6 5 YR 7.5/1
Ripple and x Bedded
Stratification [illegible]
[illegible]
with [illegible] 2/4

S[illegible] [illegible] of [illegible]
[illegible]
[illegible]

[illegible] 17-[illegible]-1 come from [illegible]

Ca (5) Cu (5) A C

MINIATURE

PERSONAL ACCOUNT BOOKS

for home and office

★

NO. 2044 OPEN STOCK

in following rulings

JOURNAL • CASH • S. E. LEDGER

RECORD • D. E. LEDGER

★

NO. 2044-A ASSORTMENT

consisting of

3-JOURNAL 3-CASH 2-S. E. LEDGER

2-RECORD 2-D. E. LEDGER

ROYAL VERNON LINE

Made in U.S.A.